NIKITIN, A.A., kand. tekhn.nauk, dots.; KARINSKAYA, L.P., red.; SERGEYEVA, I.N., red.

[Machine tools for the machining of wheel pair axles; textbook on the subjects "Study of metals, technology of metals and special machines," "Study of metals, technology of metals and building materials" for the fifth and sixth year and graduating students specializing in "Car construction, operation and maintenance" and "Diesel locomotive operation, maintenance and repair"] Stanki dlia obrabotki osei kolesnykh par; uchebnoe posobie po distsiplinam "Metallovedenie, tekhnologiia metallov i spetsstanki," "Metallovedenie, tekhnologiia metallov i konstruktsionnykh materialov" dlia studentov V, VI kursov i diplomnikov spetsial'nostei: "Vagonostroenie i vagonnoe khoziaistvo" i "Teplovozy i teplovoznoe khoziaistvo." Moskva, Vses. zaochnyi in-t inzhenerov zheldor. transporta, 1963. 79 p. (MIRA 17:3)

KARINSKIY A. S.

F

3157. HIGHER BOILER EFFICIENCY. Yuryenyev, V. N. and Karinskii, A. S. (Za Ekonomiyu Topliva (Fuel Economy), Sept. 1947, Vol. 9, 1-6). Combustion of a mixture of anthracite and lean coal with blast furnace gas is usually inefficient, being the more incomplete the higher the percentage of gas, because of insufficient draught, low temperature and excess of inert gases. The usual 1 - 2 fan arrangements do not ensure sufficient draught and different methods must be applied, viz: (a) increasing the combustion air temperature to 350-450°C, (b) directing part of the primary air from the powdered fuel through the gas burners to the furnace, (c) installing flameless burners for the blast furnace gas over the powdered fuel burners and adjusting them to burn in the dust atmosphere, (d) providing for regulation of the outlet velocity of the secondary air by installing powdered fuel burners of small cross section.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KARINSKIY, A. S. PA-23T28

USSR/Engineering Sep 1947
Boilers
Fuel Conservation

"Increasing the Economy of Boilers Operating on a Compound of Coal Dust and Blast Furnace Gas," V. N. Yurenev, A. S. Karinskiy, 5½ pp

"Za Ekonomiyu Topliva" Vol IV, No 9

Deals with the use of this fuel compound in type KO-III-200 and BMZ-90/110 boilers. This method results in increased use of blast furnace gases. The use of coal dust is recommended because it is able to burn better without making any special adjustments of air supply. Certain special adaptions must be made, however, one of which is the heating of the air 350° -450° C before it enters the combustion chamber. Illustrated with schematic diagrams, tables and graphs of operating data.

PA-23T28

KARINSKIY, D.V.

Using kinematic diagrams for the investigation of percussion mechanisms of drilling rigs. Trudy MGRI 34:161-169 '59. (MIRA 13:12)

(Boring machinery)

AFANAS'YEV, Pavel Semenovich, kand. tekhn. nauk; BURKOV, V.I., inzh., retsenzent; ZARODZINSKIY, Z.K., inzh., red.; KARINSKIY, S.A., inzh., red.; LEYN, E.A., kand. tekhn. nauk, red.; NOVIKOV, D.Z., kand. tekhn. nauk, red.; OBRAZTSOV, S.A., inzh., red.; RUDNIK, M.S., kand. tekhn. nauk, red.; SAZONOV, A.G., inzh., red. izd-va; TIKHONOV, A.Ya., tekhn. red.

[Woodworking machinery]Derevoobrabatyvaiushchie mashiny; spravochnik. Moskva, Mashgiz, 1962. 575 p. (MIRA 15:12)
(Woodworking machinery)

KARINSKIY, Sergey Sergeyevich; SAKHAROVA, I.M., red.; MAKAROVA, A.N., tekhn.red.; TARASOVA, N.M., tekhn.red.

[Rewarding the achievements of workers according to Soviet law] Pooshchreniia za uspeshnyi trud po sovetskomu pravu. Moskva, Gos. izd-vo iurid.lit-ry, 1961. 149 p. (MIRA 14:3)
(Labor laws and legislation) (Wages and labor productivity)

KARINSKIY, S.Yu.

Limit equilibrium of a grainy medium near a round stamp. Trudy Sekt. mat. i mekh. AN Kazakh. SSR 2:128-137 '63. (MIRA 16:10)

KARINSKIY, S.YU. (Alma-Ata)

"On discontinuous of the problems of statics of loose media".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

MOLYUKOV, I.D.; KARINSKIY, S.Yu.

Shapes of stable arches and semiarches. Izv.AN Kazakh.SSR. Ser.mat. i mekh. no.7:95-101 '59. (MIRA 12:5)
(Arches)

KARINSKIY, S.Yu. (Alma-Ata)

Designing the shapes of semiarches and arches. Inzh.sbor. 30:66-77 '60. (MIRA 13:10)

(Arches)

KARINSKIY, S. YU.

The Solution of a Plane Problem in Connecting with the Statics of Loose Material. p. 172

TRANSACTIONS OF THE 2ND REPUBLICAN CONFERENCE ON MATHEMATICS AND MECHANICS (TRUDY VTOROY RESPUBLIKANSKOY KONFERENTSII PO MATEMATIKE I MEKHANIKE), 184 pages, published by the Publishing House of the AS KAZAKH SSR, ALMA-ATA, USSR, 1962

KARINSKIY, S.Yu. (Alma-Ata)

Stable form of a loose medium near a rigid punch. Inzh. zhur. 3 no.2:300-311 '63. (MIRA 16:6)

(Soil mechanics)

KARINSKIY, S.Yu. (Alma-Ata)

Discontinued solutions of the problem of the pressure of filling on supporting walls. Inzh.zhur. 5 no.2:316-323 '65. (MIRA 18:4)

ACC NR: AP6027913 SOURCE CODE: UR/0105/66/000/006/0038/0042

AUTHOR: Karinskiy, Yu. I. (Candidate of technical sciences)

ORG: Voronezh Polytechnical Institute (Voronezhskiy politekhnicheskiy institut)

TITLE: Optimal diode relay circuits of high reliability using unreliable relays

SOURCE: Elektrichestvo, no. 6, 1966, 38-42 75

TOPIC TAGS: optimal control, circuit reliability, mathematic analysis, circuit design, electric relay

ABSTRACT: The article deals with the general problem of improving the reliability of relay contacts through the method of circuit design using less reliable elements. An estimate of reliable relay-contact circuits of the hammock configuration is made. Operating with the definition that an optimal, reliable circuit is one which satisfies the quorum function (the best Boolean function for reliability improvement), the principle and methods of realization of such circuits are analyzed. Reliable iteration circuits are discussed and a comparative evaluation is made of various reliable diode relay circuit designs. The present mathematical circuit analysis is an approximate one, since it makes no allowance for the following factors: relay aging and winding and contact failures; decreased probability of relay operation with increased number of relays in the circuit; decreased relay reliability with increased number of relay contacts; and possible unreliability of the diodes and other circuit components. The

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UDC: 519.21:517.11

Card 2/2

ACC NR: AP6035703 (A, N) SOURCE CODE: UR/0413/66/000/019/0051/0051

INVENTORS: Karinskiy, Yu. I.; Mikhaylov, V. V.

ORG: none

TITLE: A pulse relay for power direction. Class 21, No. 186555

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 51

TOPIC TAGS: electric power engineering, power monitor, power supply, electric relay

ABSTRACT: This Author Certificate presents a pulse relay for power direction. The relay operates on the principle of comparing the signs of the instantaneous values of the two quantities (current and voltage) at fixed instants of time. The relay includes a pulse shaper, a coincidence circuit, and an output device (see Fig. 1). To simplify the relay, the coincidence circuit and the output device are made with

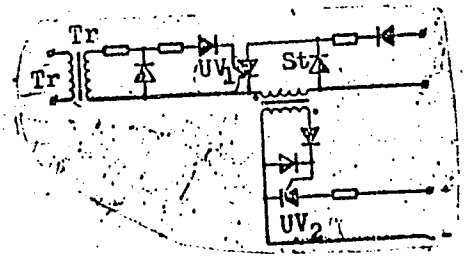

Fig. 1. T_r - pulse transformer; UV_1 and UV_2 - controlled rectifiers of the coincidence circuit and of the output device; S_t - stabilitron tube

UDC: 621.316.925.2 621.318.56.016.2

Card 1/2

ACC NR: AP6035703

controlled diodes. The coincidence circuit-controlled diode is fed a stabilized voltage from the protected object. This diode of the coincidence circuit is controlled by stabilized voltage pulses through a pulse transformer with a phase which is a function of the current phase of the protected object. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 21May64

Card 2/2

DROZDOV, A.D., dotsent, kand.tekhn.nauk; KARINSKIY, Yu.I., inzh.

Circuit for increasing the secondary-current multiplicity of magnetic transformer relays. Izv. vys. ucheb. zav.; elektromekh. no.1:96-98 '58. (MIRA 11:6)

1.Novocherkasskiy politekhnicheskiy institit.
(Electric relays)

ACC NR: AP6026345 SOURCE CODE: UR/0144/66/000/007/0781/0788

AUTHOR: Karinskiy, Yu. I. (Candidate of Technical Sciences; Acting Docent)

ORG: Automation and Telemechanics Department, Voronezh Polytechnic Institute (Kafedra avtomatiki i telemekhaniki Voronezhskogo politekhnicheskogo instituta)

TITLE: Multipurpose contactless relay for maximum and minimum alternating voltage or current

SOURCE: IVUZ. Elektromekhanika, no. 7, 1966, 781-788

TOPIC TAGS: electric relay, system reliability, electric protective equipment, semiconductor device

ABSTRACT: A contactless relay for maximum or minimum alternating voltage or current which is relatively free of the shortcomings encountered in electromagnetic type voltage and current relays is discussed. It can be used in applications where demands are higher than those usually applied. The units and elements contained in the relay are described, as are operating principles, characteristics, and results obtained from a test model. The relay was found suited for use as a protective device and in automated systems contained in electrical systems, industrial installations, and transportation media. Tests revealed satisfactory electrical characteristics, temperature stability, and vibration resistance. The use of controlled

Card 1/2 UDC: 621.316.925+621.3.022

ACC NR: AP6026345

gates, tunnel diodes, silicon regulators, and other types of semiconductor devices and instruments for relay protection and automation makes it possible to obtain characteristics unobtainable in other designs. Orig. art. has: 23 formulas, 4 figures and 1 table.

SUB CODE: 09/SUBM DATE: 29 May 65/ORIG REF: 003

SOV/144-58-10-9/17

AUTHORS: Drozdov, A.D., Doctor of Technical Sciences, Docent and Karinskiy, Yu.I., Assistant

TITLE: Longitudinal Differential Protection of Transformer-Line Units with Electro-Magnetic Relays and Saturating Transformers (Prodol'naya differentsial'naya zashchita blokov liniya-transformator s elektromagnitnymi rele i nasyshchayushchimisya transformatorami)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika, 1958, Nr 10, pp 94-103 (USSR)

ABSTRACT: Lines connected direct to transformers and also short transmission lines employ longitudinal differential protection with pilot wires. Induction and polarised relays with mechanical retardation are being used for such schemes. The retardation compensates for the action of out-of-balance currents due to resistance of the pilot wires. These out-of-balance currents may be balanced by additional currents flowing in special balancing resistors. Then ideally there is no current in the relay on the occurrence of an external fault except the out-of-balance current resulting from differences between the current transformers and

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Longitudinal Differential Protection of Transformer-Line Units with Electro-magnetic Relays and Saturating Transformers

differences between the resistances in the arms of the protective circuit. Mechanical or magnetic retardation can be used to compensate for these currents. This article describes a longitudinal differentially protected system with electro-magnetic relay type ET-520 and with magnetic retardation obtained by means of saturating transformers. When external faults occur the cores of these transformers are magnetised in such a way that the operating current of the protective system is increased. A schematic diagram of the protective circuit is given in Fig 1, it requires two pilot wires of length of up to 20 km with resistance up to 1500 ohms and capacitance up to 1.2 μF between conductors. The minimum operating current on the occurrence of an internal three-phase short circuit is 7.5 A with supply from one side and for two-phase faults it is 2.7 A. With supply from both sides the operating current is about halved. The operating current value can be adjusted by means of

 tappings on the primary windings of the saturating

Longitudinal Differential Protection of Transformer-Line Units with Electro-Magnetic Relays and Saturating Transformers

transformer. The component parts of the circuit are described. Current filters convert the three-phase system of currents to single-phase. The saturating transformer in the protective circuit serves to set up retardation to prevent the protection from operating on magnetising current surges and to limit the voltage on the pilot wires. The characteristics of the saturating transformer are given in Fig 1. The design of saturating transformers is briefly discussed. The relay transformer serves to apply to the relay the difference between the line and balancing currents and to isolate the relay from the remaining protective circuits. The relay transformers have very low power losses. The characteristics of the relay transformer are given in Fig 1. The design of the protective circuit is then considered. The balancing circuit constants are first calculated so as to ensure that there is no relay current on the occurrence of an external fault. The design is based on the equivalent

 circuit for currents in the protective system given in

Longitudinal Differential Protection of Transformer-Line Units with Electro-Magnetic Relays and Saturating Transformers

Fig 2. The circuit is balanced if the impedances of the balancing circuit and the linear circuit ABCD (Fig 2) have identical active and reactive components respectively. It is then shown how to calculate the various impedances and the capacitance connected across the relay. When the system is supplied from both sides the equivalent circuit for currents in the protective system becomes as shown in Fig 3. Calculations are then made of the currents and voltages in this circuit. The characteristics of the protective system were then studied. The balancing impedances and capacitors were selected to suit a pilot wire impedance of 1000 ohms with capacitance between pilot wires of 2 x 0.4 μF. The retardation characteristics of the protection for the case when the impedance of the pilot wires corresponds to the tuning of the protection and the capacitance is 2 x 0.5 μF, are given in Fig 4. The retardation characteristics given in Fig 5 correspond to minimum resistance of the pilot wires (600 ohms) and low capacitance between them

Longitudinal Differential Protection of Transformer-Line Units with Electro-Magnetic Relays and Saturating Transformers

(3 x 0.4 μF). Tests of the protective system showed that the retardation characteristics vary a little over a wide range of resistance of pilot wires and capacitance between them. Reducing the capacitance between the pilot wires somewhat improves the retardation characteristics but impairs the sensitivity somewhat. The angular characteristic is defined as the relationship between the operating current of the protective system at one end of the block (for a certain value of current at the other end) and the phase angle between these currents. The angular characteristic given in Fig 6 is obtained with a secondary current at one end of 15 A flowing in phases B and C. It may be shown from the angular characteristic that the protection is more sensitive when the larger of the two currents is lagging. The angle of retardation of the protection can be adjusted by changing the induction in the saturating transformers, increase of the operating induction increases the angle of retardation. The operating time of the protective system was determined as function of the primary current.

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In the independent part of the characteristic the operating time of the protective system was 35 m sec. The total operating time allowing for the output intermediate relay type EP-133 is 70 to 80 msec. Oscillograms of the voltage on the secondary winding of the insulating transformer when the pilot wires are cut are given in Fig 7. It will be seen that the capacitance between the pilot wires considerably reduces the voltage peak. With the pilot wires in good condition the mean value of voltage measured by a rectifier type voltmeter does not exceed 100 V. Breakage of the pilot wires does not cause false interruption of the protective system. Short circuits from the pilot wires do not cause false operation either. The power consumption of the protective system is 10 VA with a symmetrical three-phase current of 5A. Operating currents obtained with different types of fault are

Longitudinal Differential Protection of Transformer-Line Units with Electro-Magnetic Relays and Saturating Transformers

tabulated. There are 7 figures and 3 references, 2 of which are Soviet and 1 English.

ASSOCIATION: Kafedra Elektricheskikh Stantsiy, Setey i Sistem Novocherkasskogo Politekhnicheskogo Instituta (Chair of Power Stations, Novocherkassk Polytechnical Institute)

SUBMITTED: 11th November 1958

L 15651-65 EWT(1)/EWA(h) Peb GG

ACCESSION NR: AP5013167 UR/0144/64/000/012/1475/1482

AUTHOR: Karinskiy, Yu. I.; Mikhaylov, V. V.

TITLE: Contactless response element for transformer relays

SOURCE: IVUZ. Elektromekhanika, no. 12, 1964, 1475-1482

TOPIC TAGS: electric transformer, electric relay, electronic rectifier

Abstract: The article deals with the application problems in certain types of controlled rectifier devices used in conjunction with transformer relays. The volt-ampere and the response characteristics are discussed and the design parameters are determined on this basis. Specifically, two models of such relays with contactless response elements are described: DZT-1 with time delay and RNT-562 which is a current-unbalance relay; both are used for transformer protection and have so far proved successful in operation. They are considered superior to electromagnetic type elements with regard to size, power consumption, life, resistance to shock and vibration. Orig. art. has 7 figures.

ASSOCIATION: none

SUBMITTED: 15Jul64 ENCL: 00 SUB CODE: EC, EE

NO REF SOV: 004 OTHER: 002 JPRS

Card 1/1 mb

DROZDOV, A.D., doktor tekhn.nauk, prof.; KARINSKIY, Yu.I., inzh.

Longitudinal differential current protection of lines analogous to connecting wires. Izv. vys. ucheb. zav.; energ. 4 no.7:1-9 Jl '61. (MIRA 14:7)

1. Novocherkasskiy politekhnicheskiy institut imeni S. Ordzhonikidze. Predstavlena kafedroy elektricheskikh stantsiy, setey i sistem.

(Electric protection) (Electric power distribution)

KARINSKIY, Yu.I., inzh.

Device for checki[ng] the connecting wires of longitudinal differential protection systems of power transmission lines. Izv.vys.ucheb.zav.; energ. 7 no. 4:95-99 Ap '64. (MIRA 17:5)

1. Novocherkasskiy politekhnicheskiy institut imeni S.Ordzhonikidze. Predstavlena kafedroy elektricheskikh stantsiy, setey i sistem.

KARINSKIY, Yu.[illegible] inzh.

Calculation of longitudinal differential protection systems with compensation for [illegible]. Izv. vys. ucheb. zav.; energ. [illegible] no. 8:20-23 Ag '62. (MIRA 17:7)

1. Novocherkasskiy politekhnicheskiy institut imeni S. Ordzhonikidze. Predstavlena kafedroy elektricheskikh stantsiy i sistem.

KARINSKIY, Yuriy Igorevich, kand.tekhn.nauk, starshiy prepodavatel';
MIKHAYLOV, Vladimir Vladimirovich, kand.tekhn.nauk, dotsent

Contactless sensitive device for transformer relays. Izv.vys.ucheb. zav.; elektromekh. 7 no.12:1475-1482 '64.

(MIRA 18:2)

1. Kafedra elektricheskikh stantsiy, setey i sistem Novocherkasskogo politekhnicheskogo instituta.

L 11343-67 EWT(l)/EWT(m) WW/DJ/GD
ACC NR: AT6028947 SOURCE CODE: UR/0000/66/000/000/0368/0378

16

AUTHOR: Karintsev, I. B. (Engineer)

ORG: none

TITLE: Rotation stability of centrifugal pump impellers

SOURCE: Dinamika mashin (Dynamics of machinery); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1966, 368-378

TOPIC TAGS: fluid pump, centrifugal pump, centrifugal pump impeller, impeller stability, BEARING STABILITY

ABSTRACT: An analysis is presented of the vibration stability of a rigid centrifugal pump impeller mounted on short hydraulic bearings. Since the flow structure in this type of bearing is similar to that occurring in sliding bearings, the hydrodynamic equations previously derived for short sliding bearings were used in the analysis. A stability criterion was established as a function of four dimensionless parameters: $\frac{Q}{M\delta\omega^2}$, $\varkappa$, σ, and ε_0. Here, $Q = P_0(1 - \varkappa)r\ell$; P_0 is the difference between the inlet and exit pressures; $\varkappa$, ratio between inlet and total hydraulic resistance in the bearing clearance; M, shaft mass; r and ℓ are the bearing radius and length, respectively; δ, radial clearance parameter; ε_0, eccentricity; ω, angular velocity; and

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ACC NR: AT6028947

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$\sigma = Re_x/Re_3 \cdot \ell/r$, (where Re_x and Re_3 are the circumferential and axial Reynolds numbers). The stability zones are indicated in Fig. 1, where

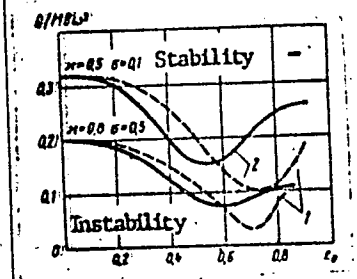

Fig. 1. Stability zones

1 - Turbulent regime; 2 - laminar regime.

parameter $\frac{Q}{M\delta\omega^2}$ is plotted against the eccentricity for various values of $\varkappa$ and σ. A decrease in parameter $\varkappa$ reduces the stability zone, while a decrease in parameter σ increases the stability zone. Flow turbulence can have either negative or positive effect on the stability. At an eccentricity of 0.5, the turbulence reduces stability; at larger eccentricities the stability improves. Orig. art. has: 3 figures and 31 formulas.

SUB CODE: 13/ SUBM DATE: 21Apr66/ ORIG REF: 004/ OTH REF: 002

Card 2/2

20167

S/114/61/000/004/002/006
E194/E435

26.2141

AUTHORS: Martsinkovskiy, V.A., Engineer and
Karintsev, I.B., Engineer

TITLE: The Influence of Radial Clearance Glands on the Critical Speed of Feed Pump Rotors

PERIODICAL: Energomashinostroyeniye, 1961, No.4, pp.12-14

TEXT: Feed pump rotors are a complicated oscillatory system for which it is very difficult to provide an accurate theoretical calculation. The only existing method, proposed by Professor A.A.Lomakin (Ref.1) is approximate and a considerable series of experiments were made to assess its accuracy. An experimental feed pump rig was used to test a full-scale rotor of a feed-pump type ПЭ 320-200 (PE 320-200) with two glands which were located either near the middle or adjacent to the bearings. The geometry and type of glands are given in tables 1 and 2. Tests were made with various values of pressure drop across the glands ranging from 0 to 60 atm. The influence of the diameter of single gap and multi-gap glands was investigated on a special single-disc rotor. The first critical speed in air was 2900 r.p.m. for the

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single disc and 2340 r.p.m. for the full-scale rotor. Tests were made in the speed range of 0 to 8500 r.p.m. Rotor vibration was measured by inductive pick-ups recording on an electromagnetic oscillograph. Particular attention was paid to single-gap glands as experience with the feed pumps at the Cherepet power station has shown that they are most reliable in ensuring vibration stability of the rotor. A study was made of the influence on the value of the first critical speed, on the resonance amplitudes and on the unstable conditions of the rotor of the following parameters of single gap glands: the pressure drop on the glands, the radial gap, the length of the gap, the diameter of the gland, the eccentricity of the rotor relative to the gland, the place of location of the gland and the shape of the inlet edges of the gland. In both these curves the critical speed in r.p.m. is plotted on the y axis, in curve 1a as a function of pressure drop and in curve 1b as function of the gap length. No influence of the shape of the inlet edges on oscillation of the rotor was found but this shape has a considerable influence on wear of the gland rings which were subject to erosion to a depth of about 1.5 mm after about an hour's working as shown in Fig.2.

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In this figure the place of wear is marked in black. The glands reduce the amplitude of resonance vibrations, particularly when the gap is reduced and the diameter and length of the gland is increased. Unstable conditions, which are most dangerous, also occur with glands but the zones of instability for rotors with glands are much higher than for rotors in air. In the tests instability commenced at speeds of 7000 to 8000 r.p.m. with pressure drops not exceeding 10 atm. At higher pressure drops they disappeared completely. Results have also been obtained on the influence of the critical speed of rotors of the dimensions of individual gaps in 2 and 3 gap glands. The variants of gland tested are given in table 2; the construction and notation used will be seen from Fig.3. In multi-gap glands clearances have different influences in different designs. In Fig.3 if the gap b_2 is reduced the critical speed is reduced, the resonance amplitude is increased and instability becomes worse. The clearances b_1 and b_2 have the opposite effect. The experimental investigations show that glands increase the critical speed of the rotor. The dotted lines in Fig.1 correspond to

critical speeds calculated by the method of Professor A.A.Lomakin for radial gaps in glands of 0.3 mm. In this particular case agreement with experiment is good. In Fig.1b which shows the influence of the gland length on the critical speed for various pressure drops, it will be seen that there is first a marked increase in the critical speed with the length of gland, but later this tails off. This is in general agreement with the theoretical curves. The amplitude of resonance oscillations is much reduced by the presence of a gland so that transition of the rotor through a resonance is not dangerous. Often the amplitudes are so small that the resonance speeds could not be accurately determined from the oscillograms. There must be considerable damping forces both in the glands and in the plain bearings. It is most important to determine these forces. Multi-gap glands differ in principle from single-gap in that they may reduce the critical speed of the rotor as compared with its value in air. Two-gap glands have no advantages over single-gap. The use of a greater number of gaps may be advantageous provided that the even-number clearances are large but the use of such glands will increase frictional losses

and the optimum number should be selected on the basis of vibration stability, reduction in volumetric losses and disc friction. The tests show that unstable conditions are dangerous in high pressure feed pumps. It is known that the cause of loss of stability is friction between the rotor and the medium in the glands which sets up forces perpendicular to the line of centres. In multi-gap glands if the clearance b_2 is small, then two and three gap glands can become sources of excitation of vibrations which commence at sub-critical speeds and are maintained over a wide range of speed. Increasing the clearance b_2 avoids these oscillations. It is also concluded that there is no point in increasing the gland length above 60 mm in order to increase the critical speed of the rotor. The greatest effect in increasing the rigidity is obtained with glands near the centre of the rotor and these should, therefore, be used to increase the critical speed. The question of the influences of gland clearances on the critical speed is still open and for clearances of 0.25 to 0.3 mm, which are commonly used, the calculated critical speed of the rotor with a single pair of glands is in satisfactory agreement

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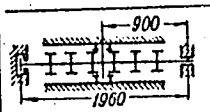
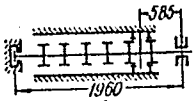
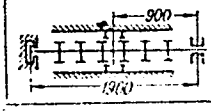
The Influence of Radial ...

with experiment. There are 4 figures, 3 tables and 5 Soviet references.

Table 1.

1 - diagram of gland arrangement
2 - reference number
3 - length of the gland mm
4 - radial gap b mm
5 - notation of the points on the curves of Fig.1a and b.

ТАБЛИЦА 1

(1) Схема расположения уплотнений	(2) № п/п	(3) Длина уплотнений, мм	(4) Радиальный зазор b, мм	(5) Обозначение точек	
	1	20	0,10	×	К рис. 1, а
	2	20	0,25	○	
	3	20	0,40	△	
	4	20	0,25	●	
	5	20	0,40	▲	
	6	20	0,75	⊠	
	7	20	1,00	⊠	
	8	10	0,10		К рис. 1, б
	9	20	0,10; 0,25; 0,40		
	10	60	0,10		

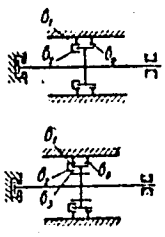
Card 6/9

The Influence of Radial ...

Table 2.

1 - gland arrangement
2 - notation of the points on the curves of Fig.4a and b.

ТАБЛИЦА 2

(1) Тип уплотнений	№ п/п	l_1 мм	l_2 мм	b_0 мм	b_1	b_2	b_3	(2) Обозначение точек	
	1	20	15	0,20	0,25	0,20	0,20	×	К рис. 4, а
	2	20	15	0,20	0,25	0,45	0,20	○	
	3	20	15	0,20	0,25	0,75	0,20	△	
	4	20	15	0,20	0,25	1,00	0,20	□	
	5	20	15	0,20	0,20	0,20	—	●	К рис. 4,б
	6	20	15	0,20	0,20	0,40	—	▲	
	7	20	15	0,20	1,00	1,00	—	■	

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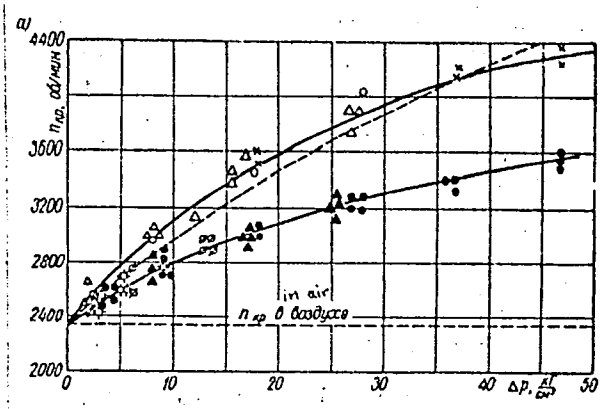
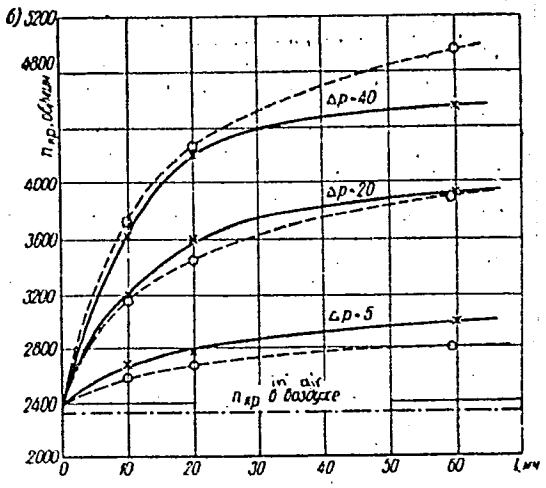
S/114/61/000/004/002/006
E194/E435

The Influence of Radial ...





Card 3/3

The Influence of Radial ...

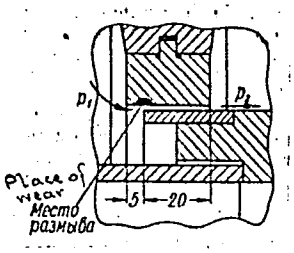


Fig.2.

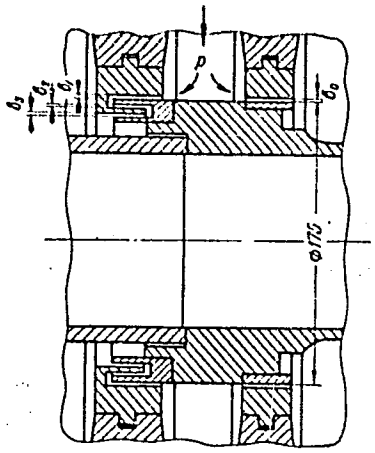


Fig.3.

Card 9/9

KARINTSEV, I.B.

Turbulent flow of a viscous noncompressible fluid in short bearing slots. Trudy Lab.gidr.mash.AN USSR no.11:62-72 '64.
(MIRA 17:10)

KARINTSEV, I.B.

Rising force in slotted sealings. Sbor.trud.Lab.gidr.mash.AN URSR no.10:38-43 '62. (MIRA 15:12)

(Pumping machinery)

KARINTSEV, I.B.

Stability of the motion of rotors of hydraulic machines on short supports of liquid friction. Dop. AN URSR no.3:327-331 '64. (MIRA 17:5)

1. Laboratoriya gidravlicheskikh mashin AN UkrSSR. Predstavleno akademikom AN UkrSSR G.I. Sukhomelom [Sukhomel, H.I.].

CHUSOV, V.G., kandidat tekhnicheskikh nauk; KARINTSEVA, I.N., redaktor; TARASENKO, Z.K., tekhnicheskiy redaktor

[Distillery equipment] Oborudovanie spirtovykh zavodov. Moskva, Pishchepromizdat, 1950. 330 p. (MLRA 7:8)
(Distillation apparatus)

KARINTSKIY, V. A.

Karintskiy, V. A. and Zatsepina-dizertinskaya, T. S. "The phenomenon of intensive movement of the mercury bulb during microanalystic reaction of exposed mercury," Sbornik nauch trudov (Rost. n/D gos. med. in-t), Vol. VIII, 1948, p. 55-57

SO: U-2868, Letopis Zhurnal'nykh Statey, No. 1, 1949

VASIL'TSOV, V.D.; VOLODARSKIY, L.M.; VOLCHENKO, M.Ya.; GALETSKAYA, R.A.; IROV, N.I.; KARINYA, L.F.; KONOVALOV, Ye.A.; MATVIYEVSKAYA, E.D.; PETRESKU, M.I.; RUDAKOV, Ye.V.; SAYFULINA, L.M.; SKVORTSOVA, A.M.; SOKOLOVA, N.M.; SOTNIKOVA, I.A.; STOLPOV, N.D.; SURKO , Yu.V.; TEN, V.A.; TRIGUBENKO, M.Ye.; FIRSOVA, Yu.V.; SHABUNINA, V.I.; YUMIN, M.N.; RYABUSHKIN, T.V., doktor ekon. nauk, otv. red.; ALAMPIYEV, P.M., red.; PAK, G.V., red.; GERASIMOVA, D., tekhn.red.

[Economy of socialist countries, 1960-1962] Ekonomika stran sotsializma, 1960-1962gg. Moskva, Izd-vo "Ekonomika," 1964. 261 p. (MIRA 16:12)

1. Akademiya nauk SSSR. Institut ekonomiki mirovoy sotsialisticheskoy sistemy.
(Communist countries--Economic conditions)

KARIOFILLI, G.S., general-polkovnik artillerii

Most important fire power. Voen. znan. 37 no.11:8-10 N '61.
(MIRA 14:11)

(Artillery) (Rockets (Ordnance)) (World politics)

Country : USSR M

Category : 'CULTIVATED PLANTS. COMMERCIAL. Oleiferous. Sugar-bearing'.

Abs. Jour. : REF ZHUR-BIOL.,21,1958,NO-96063

Author : Mush.V.N.; Karlonova,A.S.

Institut. : All-Union Sci.Res.Inst.of Oil and Essential Oil-*

Title : Preplanting Soil Treatment for Sunflowers

Orig. Pub. : V sb.: Kratkiy otchet o nauchno-issledov. rabote Vses. n.-i. in-ta maslichn. i efiromaslichn. kul'tur za 1956 g., Krasnodar,"Sov. Kuban",1957,225-227

Abstract : Field trials on the Maydanovskiy Experimental Field (Maydanovskaya Opytnaya) have shown that the application of cultivation at the moment weeds spp ar in mass sharply reduces the weed choking in sunflower plantings. Preplanting treatment considerably increases the yield (by 2.5-4.2 cwt/ha). --A.S.

'Bearing Crops

Card: 1/1

KARIOZEN, Zofia

Changes in the electrophoretic composition of blood serum proteins in the cases of acute posoning with chemical substances. Med. pracy 16 no.4:293-299 '65.

1. Z Dzialu Klinicznego Instytutu Medycyny Pracy w Lodzi (Dyrektor: doc. dr. med. J. Nofer).

KARIT ID, S. D.

KARIT ID, S. D. -- "Investigation of the [illegible] of 16-mm Films." [illegible], All-Union Sci Res Cinephotographic Inst (NIKFI) (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Vechernaya Moskva, January-December 1952

KARIPIDI, S.

The new NIKFI control films. Kinomekhanik no.10:25-31 O '53. (MLRA 6:10)
(Moving-picture projection)

KARIPIDI, S.D.

Sound track on 16 mm. films. Usp.nauch.fot. 2:207-214 '54. (MLRA 7:5)
(Motion pictures, Talking) (Sound--Recording and reproductin)

KARIPIDI, Sokrat Dmitriyevich; YAKOBSON, A.Kh., redaktor; CHICHERIN, A.N., tekhnicheskiy redaktor

[Control films] Kontrol'nye fil'my. Moskva, Gos. izd-vo "Iskusstvo," 1956. 91 p. (MLRA 10:1)
(Motion picture projection)

KARIPIDI, S.D.

Standardization of motion-picture equipment. Standartizatsiia 24 no.9:25-27 S '60. (MIRA 13:9)
(Motion-picture photography--Films--Standards)

NOVIK, F.S.; KARIPIDI, S.D.

Lenses for narrow-film motion-picture cameras. Standartizatsiia 25 no.11:43-44 N '61. (MIRA 14:11)
(Motion-picture cameras—Equipment and supplies)

PROVORNOV, Sergey Mikhaylovich; GOLOD, Iosif Semenovich; BERSHTEYN, Naum Davydovich. Prinimal uchastiye KARIPIDI, S.D., kand. tekhn. nauk, starshiy nauchnyy sotr.; EYSYMONT, L., red.; PEREGUDOVA, M., tekhn. red.

[Equipment for motion-picture film printing]Kino-kopiroval'-naia apparatura. Moskva, Iskusstvo, 1962. 314 p. (MIRA 15:10)

(Motion-picture photography--Equipment and supplies)

KARIPIDI, Sokrat Dmitriyevich; BOGATOVA, V.S., red.

[Control of the quality of motion-picture projection] Kontrol' kachestva kinopokaza. Izd.2., ispr. i dop. Moskva, Iskusstvo, 1964. 170 p. (MIRA 18:3)

USSR / Plant Diseases. Diseases of Cultivated Plants. 0

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No. 100587

Author : Karis, H.
Inst : Estonian AS
Title : The Influence of Some Micronutrients on the Resistance of Tomatoes to Macrosporium and Phytophthora Infections

Orig Pub : Eesti Pollumaj. Akad. teaduslike tööde kogumik, Sb. nauchn. tr. Est. s.-kh. akad., 1957, 3, 127-133

Abstract : Solutions of the salts of $KMnO_4$ - 0.05%, $CuSO_4$ and H_3BO_3 - 0.01 and 0.02%, $(NH_4)MoO_4$ - 0.02% were used for the pre-sowing treatment of the seeds and the spraying of tomato plants during the formation of the fruits. Control seeds were soaked in distilled water. Mn and Cu appreciably delayed and lowered the infection of the plants by macrosporium and phytophthora. B also had a positive influence on the resistance to macrosporium.

Card 1/2

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Card 2/2

BONCH-BRUYEVICH, A. M. VARGIN, V. V. IMAS, Ya. A. KARAPETYAN, G. O. KARIS, Ya. E. TOLSTOY, M. N. and FEOFILOV, P. P.

"Luminescence and induced radiation of a glass activated by neodymium."

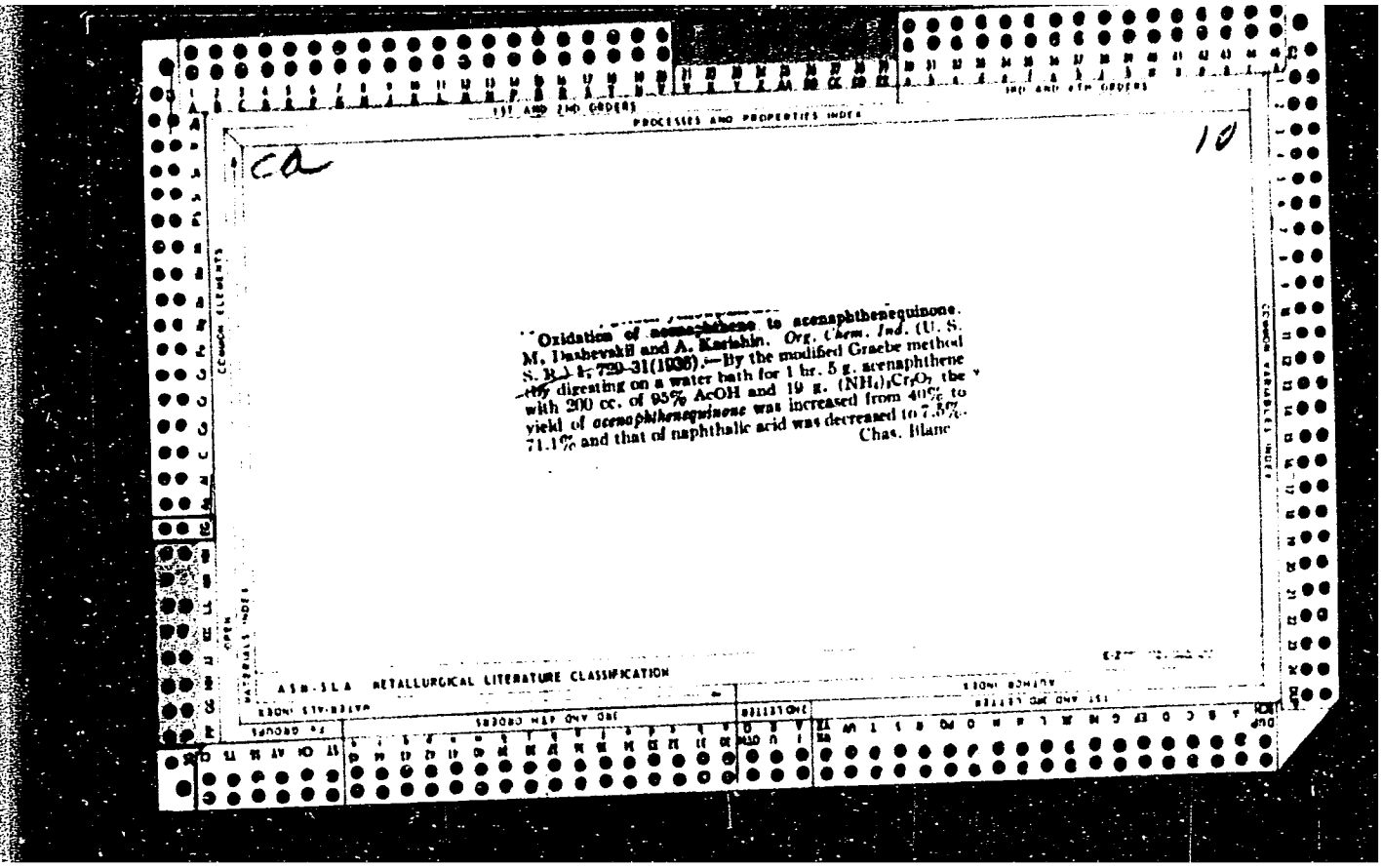
The report gives the absorption and luminescence spectra of glass containing 0.1--10% neodymium. Stimulated emission in the region of 1.06 H, observed in specimens, was investigated at room and nitrogen temperatures.

Report presented at the 11th conference on Luminescence (Molecular luminescence and luminescence analysis) Minsk, 10-15 Sep 1962

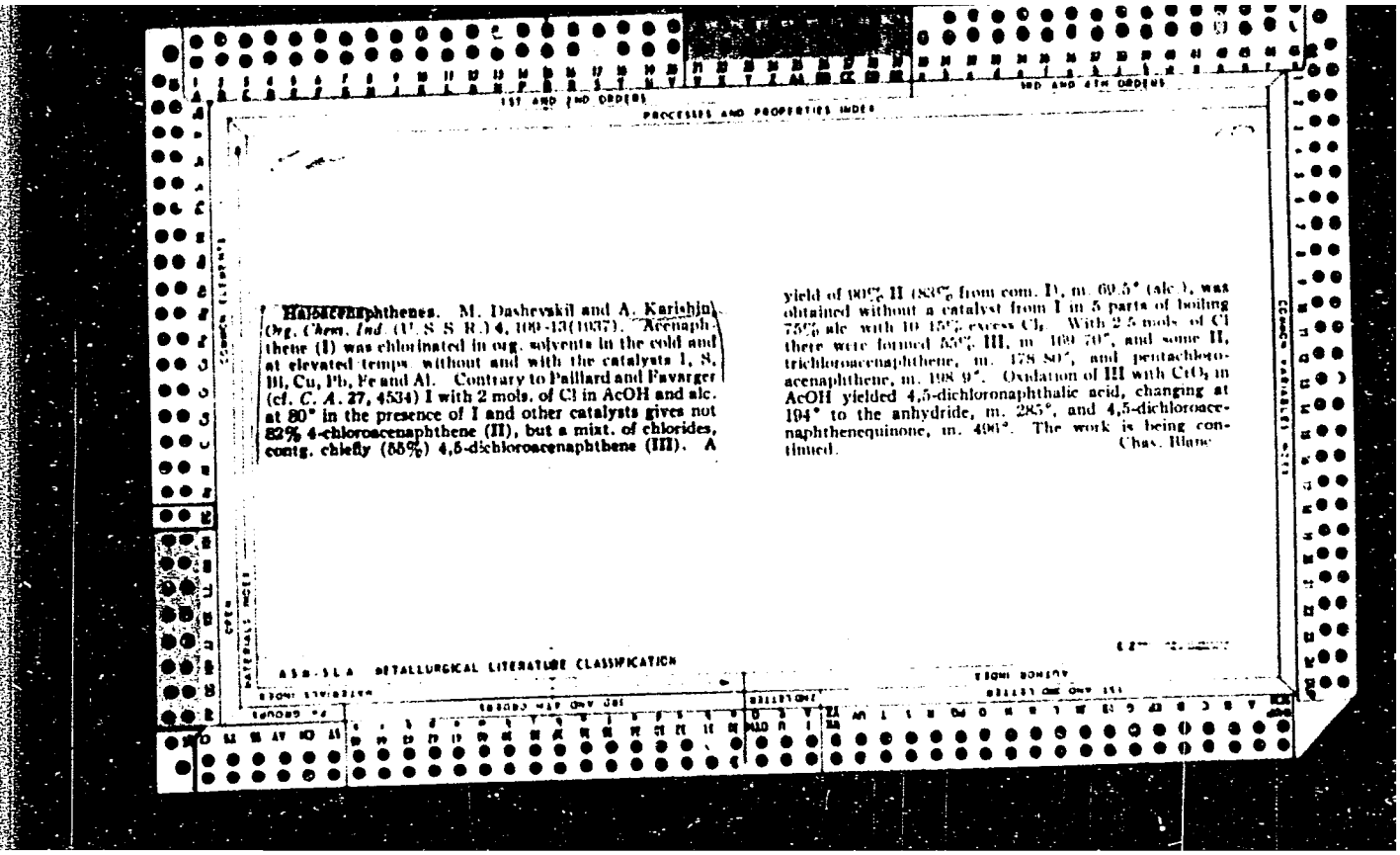
GOLOTA, Ya.A., kand.biolog. nauk; CHEPUROV, K.P., prof.; KARISHEVA, A.F., aspirant

Methods for detecting living Leptospira in thoracic and ventral transudates of piglets. Veterinariia 40 no.5:29-30 My '63. (MIRA 17:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya.



Oxidation of acenaphthene to acenaphthenequinone. M. Dashevskiĭ and A. Karlshin. *Org. Chem. Ind.* (U. S. S. R.) 4, 729-31(1936).—By the modified Graebe method only digesting on a water bath for 1 hr. 5 g. acenaphthene with 200 cc. of 95% AcOH and 19 g. $(NH_4)_2Cr_2O_7$ the yield of *acenaphthenequinone* was increased from 40% to 71.1% and that of naphthalic acid was decreased to 7.5%.
Chas. Blanc

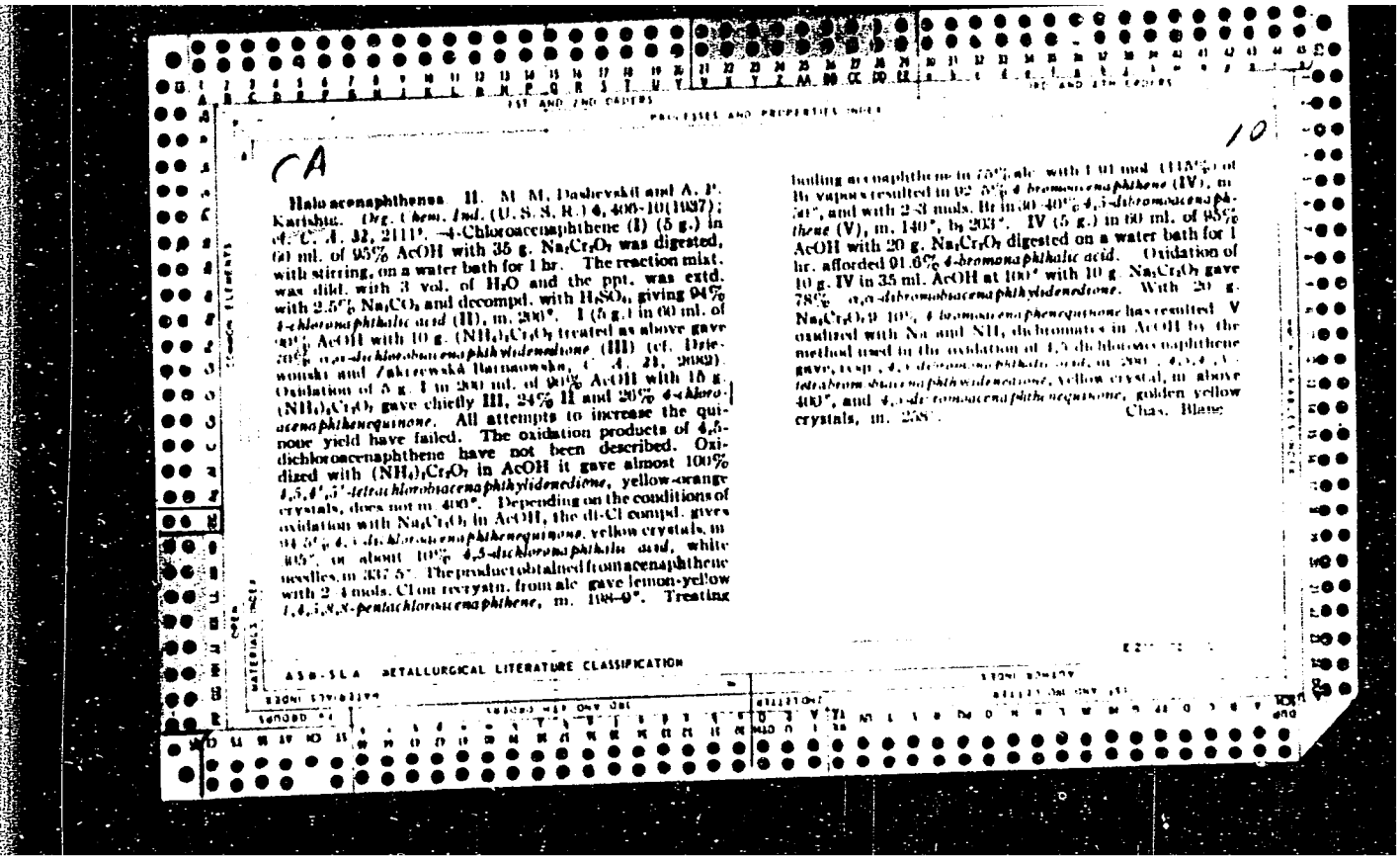


PROCESSES AND PROPERTIES INDEX

Halogenaphthenes. M. Dashevskil and A. Karishin (*Org. Chem. Ind.* (U.S.S.R.) 4, 109-13(1937)). Acenaphthene (I) was chlorinated in org. solvents in the cold and at elevated temps. without and with the catalysts I, S, Bi, Cu, Pb, Fe and Al. Contrary to Paillard and Favarger (cf. *C. A.* 27, 4534) I with 2 mols. of Cl in AcOH and alc. at 80° in the presence of I and other catalysts gives not 82% 4-chloroacenaphthene (II), but a mixt. of chlorides, contg. chiefly (55%) 4,5-dichloroacenaphthene (III). A yield of 90% II (83% from com. I), m. 69.5° (alc.), was obtained without a catalyst from I in 5 parts of boiling 75% alc. with 10-15% excess Cl_2. With 2.5 mols. of Cl there were formed 55% III, m. 169-70°, and some II, trichloroacenaphthene, m. 178-80°, and pentachloroacenaphthene, m. 198.9°. Oxidation of III with CrO_3 in AcOH yielded 4,5-dichloronaphthalic acid, changing at 194° to the anhydride, m. 285°, and 4,5-dichloroacenaphthenequinone, m. 490°. The work is being continued.

Chas. Blanc

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

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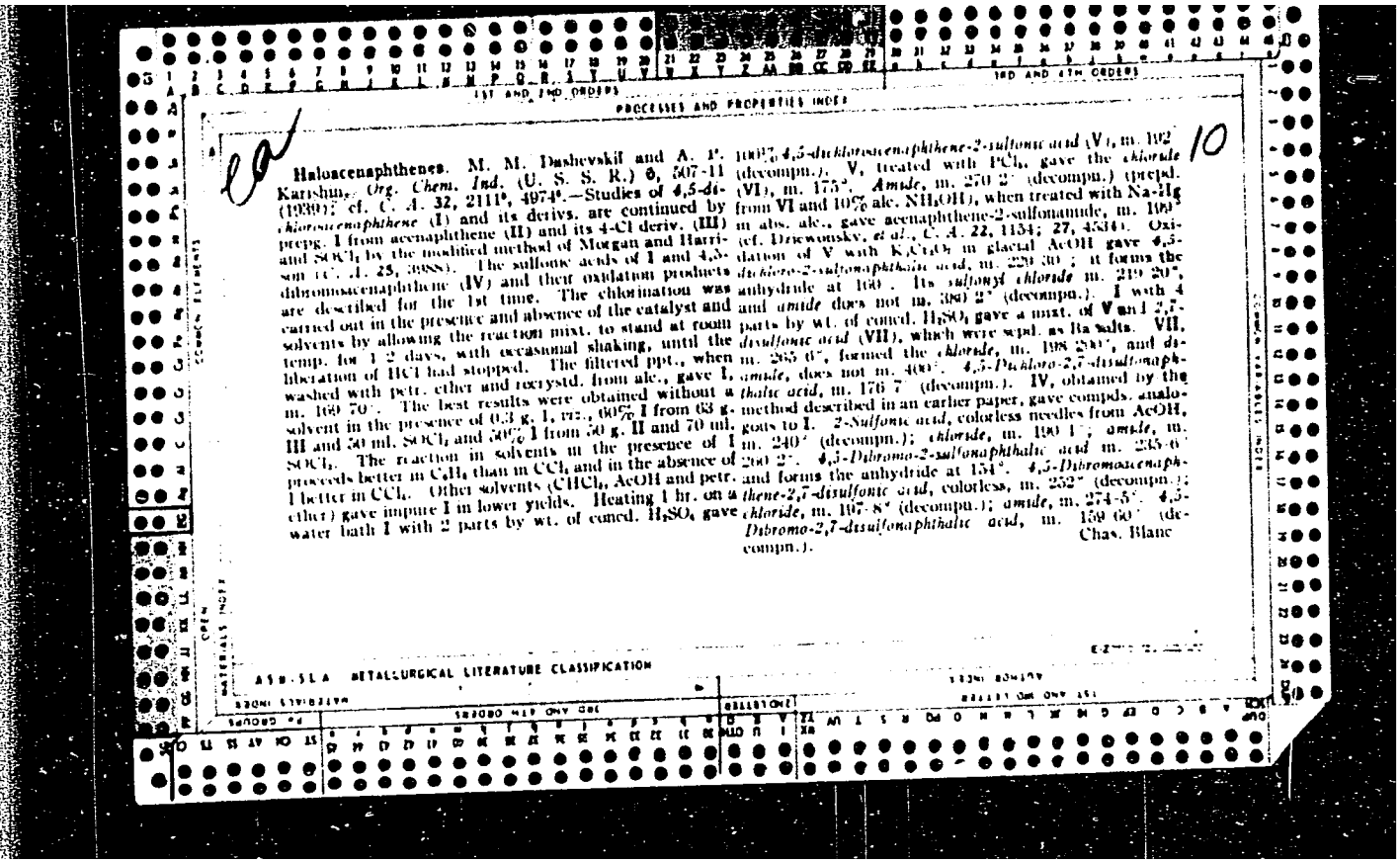
Haloacenaphthenes. II. M. M. Dashevskiĭ and A. P. Karishta. *Org. Chem. Ind.* (U. S. S. R.) 4, 406-10(1937); cf. C. A. 32, 2111⁹. —4-Chloroacenaphthene (I) (5 g.) in 60 ml. of 95% AcOH with 35 g. $Na_2Cr_2O_7$ was digested, with stirring, on a water bath for 1 hr. The reaction mixt. was dild. with 3 vol. of H_2O and the ppt. was extd. with 2.5% Na_2CO_3 and decompd. with H_2SO_4, giving 94% *4-chloronaphthalic acid* (II), m. 200°. I (5 g.) in 60 ml. of 90% AcOH with 10 g. $(NH_4)_2Cr_2O_7$ treated as above gave 20% *α,α-dichloroacenaphthylidenedione* (III) (cf. Driewonski and Zakrzewska Barnasowska, C. A. 31, 2082). Oxidation of 5 g. I in 200 ml. of 90% AcOH with 15 g. $(NH_4)_2Cr_2O_7$ gave chiefly III, 24% II and 20% *4-chloroacenaphthenequinone*. All attempts to increase the quinone yield have failed. The oxidation products of 4,5-dichloroacenaphthene have not been described. Oxidized with $(NH_4)_2Cr_2O_7$ in AcOH it gave almost 100% *4,5,4',5'-tetrachloroacenaphthylidenedione*, yellow-orange crystals, does not m. 400°. Depending on the conditions of oxidation with $Na_2Cr_2O_7$ in AcOH, the di-Cl compd. gives 94.5% *4,5-dichloroacenaphthenequinone*, yellow crystals, m. 405°, or about 10% *4,5-dichloronaphthalic acid*, white needles, m. 337.5°. The product obtained from acenaphthene with 2.4 mols. Cl on recrystn. from alc. gave lemon-yellow *1,4,5,8,8-pentachloroacenaphthene*, m. 108–9°. Treating boiling acenaphthene in 75% alc. with 1.01 mol. (115%) of Br vapors resulted in 92.5% *4-bromoacenaphthene* (IV), m. 74°, and with 2.31 mols. Br in 40–40% *4,5-dibromoacenaphthene* (V), m. 140°, b. 203°. IV (5 g.) in 60 ml. of 95% AcOH with 20 g. $Na_2Cr_2O_7$ digested on a water bath for 1 hr. afforded 91.6% *4-bromonaphthalic acid*. Oxidation of 10 g. IV in 35 ml. AcOH at 100° with 10 g. $Na_2Cr_2O_7$ gave 78% *α,α-dibromoacenaphthylidenedione*. With 20 g. $Na_2Cr_2O_7$ 9 10%, *4-bromoacenaphthenequinone* has resulted. V oxidized with Na and NH, dichromates in AcOH by the method used in the oxidation of 4,5-dichloroacenaphthene gave, resp., *4,5-dibromonaphthalic acid*, m. 280°, *4,5,4',5'-tetrabromoacenaphthylidenedione*, yellow crystal, m. above 400°, and *4,5-dibromoacenaphthenequinone*, golden yellow crystals, m. 258°.

Chas. Blanc

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

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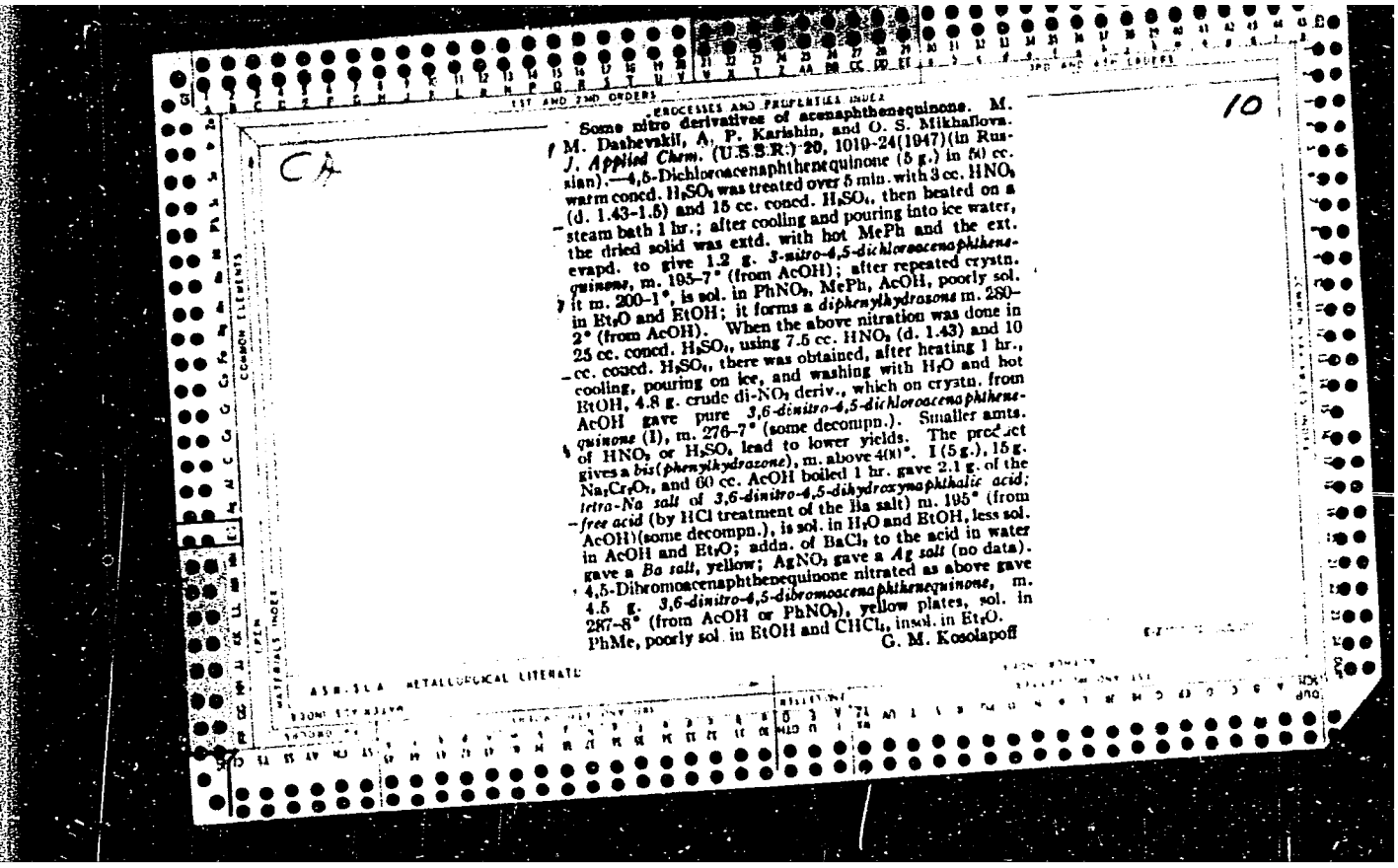
Haloacenaphthenes. M. M. Dashevskiĭ and A. P. Karishna. *Org. Chem. Ind.* (U. S. S. R.) **6**, 507–11 (1939); cf. *C. A.* **32**, 2111⁹, 4974⁸.—Studies of *4,5-dichloroacenaphthene* (I) and its derivs. are continued by prepg. I from acenaphthene (II) and its 4-Cl deriv. (III) and $SOCl_2$ by the modified method of Morgan and Harrison (*C. A.* **25**, 3988⁵). The sulfonic acids of I and *4,5-dibromoacenaphthene* (IV) and their oxidation products are described for the 1st time. The chlorination was carried out in the presence and absence of the catalyst and solvents by allowing the reaction mixt. to stand at room temp. for 1–2 days, with occasional shaking, until the liberation of HCl had stopped. The filtered ppt., when washed with petr. ether and recrystd. from alc., gave I, m. 169–70°. The best results were obtained without a solvent in the presence of 0.3 g. I, m.p., 60% I from 63 g. III and 50 ml. $SOCl_2$ and 50% I from 50 g. II and 70 ml. $SOCl_2$. The reaction in solvents in the presence of I proceeds better in C_6H_6 than in CCl_4 and in the absence of I better in CCl_4. Other solvents ($CHCl_3$, AcOH and petr. ether) gave impure I in lower yields. Heating 1 hr. on a water bath I with 2 parts by wt. of concd. H_2SO_4 gave 100% *4,5-dichloroacenaphthene-2-sulfonic acid* (V), m. 192° (decompn.). V, treated with PCl_5, gave the *chloride* (VI), m. 175°. *Amide*, m. 270–2° (decompn.) (prepd. from VI and 10% alc. NH_4OH), when treated with Na-Hg in abs. alc., gave acenaphthene-2-sulfonamide, m. 199° (cf. Dziewonsky, *et al.*, *C. A.* **22**, 1154; **27**, 4834). Oxidation of V with $K_2Cr_2O_7$ in glacial AcOH gave *4,5-dichloro-2-sulfonaphthalic acid*, m. 220–30°; it forms the anhydride at 160°. Its *sulfonyl chloride* m. 219–20°, and *amide* does not m. 300–2° (decompn.). I with 4 parts by wt. of concd. H_2SO_4 gave a mixt. of V and *2,7-disulfonic acid* (VII), which were sepd. as Ba salts. VII, m. 265–6°, formed the *chloride*, m. 198–200°, and *diamide*, does not m. 400°. *4,5-Dichloro-2,7-disulfonaphthalic acid*, m. 176–7° (decompn.). IV, obtained by the method described in an earlier paper, gave compds. analogous to I. *2-Sulfonic acid*, colorless needles from AcOH, m. 240° (decompn.); *chloride*, m. 190–1°; *amide*, m. 200–2°. *4,5-Dibromo-2-sulfonaphthalic acid* m. 235–6° and forms the anhydride at 154°. *4,5-Dibromoacenaphthene-2,7-disulfonic acid*, colorless, m. 252° (decompn.); *chloride*, m. 107–8° (decompn.); *amide*, m. 274–5°. *4,5-Dibromo-2,7-disulfonaphthalic acid*, m. 159–60° (decompn.).

Chas. Blanc

A59-51A METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

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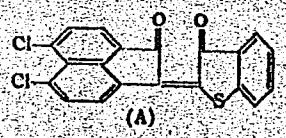
CA

Some nitro derivatives of acenaphthenequinone. M. M. Dashevskii, A. P. Karishin, and O. S. Mikhailova. *J. Applied Chem.* (U.S.S.R.) 20, 1019–24(1947)(in Russian).—4,5-Dichloroacenaphthenequinone (5 g.) in 50 cc. warm concd. H_2SO_4 was treated over 5 min. with 3 cc. HNO_3 (d. 1.43–1.5) and 15 cc. concd. H_2SO_4, then heated on a steam bath 1 hr.; after cooling and pouring into ice water, the dried solid was extd. with hot MePh and the ext. evapd. to give 1.2 g. *3-nitro-4,5-dichloroacenaphthenequinone*, m. 195–7° (from AcOH); after repeated crystn. it m. 200–1°, is sol. in $PhNO_2$, MePh, AcOH, poorly sol. in Et_2O and EtOH; it forms a *diphenylhydrasone* m. 280–2° (from AcOH). When the above nitration was done in 25 cc. concd. H_2SO_4, using 7.5 cc. HNO_3 (d. 1.43) and 10 cc. concd. H_2SO_4, there was obtained, after heating 1 hr., cooling, pouring on ice, and washing with H_2O and hot EtOH, 4.8 g. crude di-NO_2 deriv., which on crystn. from AcOH gave pure *3,6-dinitro-4,5-dichloroacenaphthenequinone* (I), m. 276–7° (some decompn.). Smaller amts. of HNO_3 or H_2SO_4 lead to lower yields. The product gives a *bis(phenylhydrazone)*, m. above 400°. I (5 g.), 15 g. $Na_2Cr_2O_7$, and 60 cc. AcOH boiled 1 hr. gave 2.1 g. of the *tetra-Na salt* of *3,6-dinitro-4,5-dihydroxynaphthalic acid; free acid* (by HCl treatment of the Ba salt) m. 195° (from AcOH)(some decompn.), is sol. in H_2O and EtOH, less sol. in AcOH and Et_2O; addn. of $BaCl_2$ to the acid in water gave a *Ba salt*, yellow; $AgNO_3$ gave a *Ag salt* (no data). 4,5-Dibromoacenaphthenequinone nitrated as above gave 4.5 g. *3,6-dinitro-4,5-dibromoacenaphthenequinone*, m. 287–8° (from AcOH or $PhNO_2$), yellow plates, sol. in PhMe, poorly sol. in EtOH and $CHCl_3$, insol. in Et_2O.

G. M. Kosolapoff

KARPUSHIN, A.P.

Halogen derivatives of acenaphthenequinone. A. P. Karpushin (Pedagog. Inst., Poltava). *Ukrain. Khim. Zhur.* 18, 109–12 (1952) (in Russian); cf. Morgan and Harrison, *C.A.* 25, 3988.—Heating 5 g. 4,5-dichloroacenaphthene (*C.A.* 5,0-dichloroacenaphthene) with 20 g. $Na_2Cr_2O_7$ and 400 ml. AcOH 1 hr. on a steam bath gave on cooling a solid product which was washed free of Cr with H_2O. Extn. with hot AcOH left behind *4,4',5,5'-tetrachlorobis(acenaphthylidene)-1,1'-dione*, orange, does not m. below 360° (from $PhNO_2$); this is obtained in 20% yield if $(NH_4)_2Cr_2O_7$ is used as the oxidant. The filtrate after evapn. was heated on a steam bath 1 hr. with stirring with 350 ml. PhBr and 200 ml. 6% Na_2CO_3; acidification of the aq. layer gave 0.7 g. *4,5-dichloronaphthalic anhydride*, m. 337–8° (from AcOH), which is obtained in 35% yield if the oxidation lasts 6 hrs. under the above conditions. The PhBr ext. heated on a steam bath 5 min. with 25–30 ml. 40% $NaHSO_3$ gave a ppt. of the bisulfite adduct, which boiled with H_2O 20 min. gave 64% *4,5-dichloroacenaphthenequinone*, golden yellow, m. 303–5° (from PhCl or PhBr); *monophenylhydrazone*, m. 213–14° (from AcOH). Refluxing this quinone (2 g.) with 1.2 g. 3-hydroxythianaphthene in AcOH 2 hrs. gave 95% *2-thianaphthene-8'-(4,5-dichloro)acenaphthyleneindigo* (A), red, m. 319–20° (from PhCl or $PhNO_2$). Heating *4,5-dichloronaphthalic anhydride* 3 hrs. with 25% NH_4OH gave 65% corresponding *imide*, m. 329–30° (from PhBr). Heating 5 g. 4,5-dibromoacenaphthene in 60 ml. AcOH to 100°, addn. of 15 g. $(NH_4)_2Cr_2O_7$ over 8 min. (vigorous reaction) results in complete reaction within 15 min.; dild. with H_2O and treatment with 6% Na_2CO_3 with heating 1 hr. gave 16% insol. *4,4',5,5'-tetrabromobis(acenaphthylidene)-1,1'-dione*, brick red, does not m. below 360° (from $PhNO_2$). Similar oxidation over 10 min. with $Na_2Cr_2O_7$ gave 18% *4,5-dibromoacenaphthenequinone*, golden yellow, m. 238–9° (from AcOH or PhCl); *mono-phenylhydrazone*, m. 189–90° (from AcOH). Oxidation of 5 g. 4,5-dibromoacenaphthene with 30 g. $Na_2Cr_2O_7$ in AcOH 1 hr. at reflux gave 85% *4,5-dibromonaphthalic anhydride*, m. 259–60° (from PhBr or AcOH); *imide*, m. 333–4° (from PhBr). Letting 5 g. 4-bromoacenaphthene, 0.01 g. $FeCl_3$ and 2 ml. SO_2Cl_2 stand 8 hrs. gave after treatment with Et_2O, 3.8 g. *4-bromo-5-chloroacenaphthene*, m. 153–5° (from AcOH). This (5 g.) oxidized with 15 g. $(NH_4)_2Cr_2O_7$ added at 100° to AcOH soln. over 8 min. gave 21% *4,4'-dibromo-5,5'-dichlorobis(acenaphthylidene)-1,1'-dione*, brick red, does not m. below 360° (from $PhNO_2$). Use of 25 g. $Na_2Cr_2O_7$ in the above oxidation, added at 100° at once, gave 40% *4-bromo-5-chloroacenaphthenequinone*, brown, m. 307–9° (from PhBr or AcOH); *bisulfite compound* forms crystals on treatment of PhBr soln. with $NaHSO_3$; *monophenylhydrazone*, m. 203–4° (from AcOH). The aq. layer in the oxidation reaction gave *4-bromo-5-chloronaphthalic anhydride*, m. 349–50° (from PhBr); *imide*, m. 341–3° (from PhBr). Dihaloacenaphthenequinones and corresponding naphthalic anhydrides form isomorphous mixts.; thus the two 4,5-dichloro derivs. crystallize together from AcOH, m. 293–5°.



(A)

G. M. Kosolapoff

KARISHIN, A.P.

USSR

Condensation of 5,6-dihaloacenaphthenequinones with 3-oxothianaphthene and its derivatives. A. P. Karishin and T. P. Fedurenko (Pedagog. Inst., Poltava). *Ukrain. Khim. Zhur.* 19, 631–8(1953)(in Russian).—This condensation is accomplished by heating equimolar amts. of the reactants in HOAc 1 hr. at the b.p. of the mixt.; the products are dyes (I) which are crystd. from $PhNO_2$. Only the I contg. a NO_2 group are easily reduced to the leuco form; those with no NO_2 group are reduced with difficulty. For reduction the latter group of I are dissolved in concn. H_2SO_4 and pptd. with H_2O; they thus become highly dispersed and easily reduced. Dissolving 5 g. 5-bromo-6-chloroacenaphthenequinone in 25 ml. concd. H_2SO_4 on a boiling steam bath, dropping in 7.5 ml. HNO_3 (d. 1.44) and 10 ml. concd. H_2SO_4 with stirring, heating 1 hr., pouring into cold H_2O, filtering, washing the ppt. with water until neutral, then with 10 ml. hot EtOH, heating 1 hr. on a steam bath with 200 ml. 6% Na_2CO_3, and crystg. the product from HOAc yields 5-bromo-6-chloro-3,6-dinitro-5-bromo-6-chloro-4,7-dinitroacenaphthenequinone, gold-yellow leaflets, m. 274–5°. The

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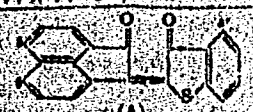
A.P. HARRISHIN



(A)

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following A were prepd. (substituents, % yield, and m.p. given): 5,6-di-Cl, 95, 319-20°; 5,6-di-Br, 76, 330-1°; 5-Br, 6-Cl, 91, 331-2°; 5,6-di-Cl, 4,7-di-O$_2$N, 80, 315-6°; 5-Br, 6-Cl, 4,7-di-O$_2$N, 58, 340-8°; 5,6,6'-tri-Cl, 74, above 350°; 5,6-di-Br, 6'-Cl, 00, above 380°; 5-Br, 6,6'-di-Cl, 60, above 380°; 5,6,6'-tri-Cl, 4,7-di-O$_2$N, 40, above 380°; 5-Br, 6,6'-di-Cl, 4,7-di-O$_2$N, 61, 331-2° (decompn.); 5,6-di-Cl, 6'-EtO, 82, 203-5°; 5,6-di-Br, 6'-EtO, 84, 317-18°; 5-Br, 6-Cl, 6'-EtO, 65, 278-80°; 5,6-di-Cl, 6'-EtO, 4,7-di-O$_2$N, 35, above 380°; 5-Br, 6-Cl, 6'-EtO, 4,7-di-O$_2$N, 64, above 360°; 5,6,6'-tri-Cl, 4'-Me, 08, 343-4°; 5,6-di-Br, 6'-Cl, 4'-Me, 67, 353-0° (decompn.); 5-Br, 6,6'-di-Cl, 4'-Me, 04, 337-9°; 5,6,6'-tri-Cl, 4,7-di-O$_2$N, 4'-Me, 05, above 360°; 5-Br, 6,6'-di-Cl, 4,7-di-O$_2$N, 4'-Me, 01, above 360°. The following thioxanthrene analogs of A were prepd.: 5,6-di-Cl, 92, above 360°; 5,6-di-Br, 80, above 360°; 5-Br, 6-Cl, 74, above 360°; 5,6-di-Cl, 4,7-di-O$_2$N, 50, above 360°; 5-Br, 6-Cl, 4,7-di-O$_2$N, 84, above 360°.

Elizabeth Burkhardt

KARISHIN, A.P.

USSR/ Chemistry - Organic chemistry

Card 1/1 Pub. 116 - 18/30

Authors : Karishin, A. P., and Fedorenko, T. P.

Title : Condensation of dihaloidacenaphthenequinones with o-diamines. Part 1.

Periodical : Ukr. khim. zhur. 21/3, 373-376, June 1955

Abstract : Experiments were conducted to determine the condensation reaction of dihaloidacenaphthenequinones and dihaloiddinitroacenaphthenequinones with o-phenylenediamine, 2,3-toluylenediamine, 3,4-toluylenediamine, 5-bromo-2, 3-toluylenediamine and 1,2-naphthylenediamine. It is shown that the condensation reaction is perfectly easy in an acetic acid medium when the solution is heated to a boiling point. The properties of twenty-five new acenaphthylenequinoxalines are listed. Three USSR references (1947-1953). Table.

Institution : State Pedagogical Institute, Poltava

Submitted : March 12, and September 13, 1954

KARISHIN, A.P.; KUSTOL, D.M.

Condensation of haloacenaphthenequinones with inodoxyl. Ukr.khim. zhur. 22 no.2:229-231 '56. (MLRA 9:8)

1. Poltavskiy gosudarstvennyy pedagogicheskiy institut.
(Indoxyl) (Acenaphthenequinone)

KARISHIN, A.P.; FEDORENKO, T.P.

Oxidation of acenaphthene in sulfuric acid to naphthalic acid. Zhur. prikl.khim.29 no.6:955 Je '56. (MIRA 9:9)
(Acenaphthene) (Naphthakic acid)

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KARISHIN, A.P.

Condensation of dihaloidacenaphtenquinones with o-diamines. Part 2.
Ukr. khim. zhur. 23 no.5:651-654 '57. (MLRA 10:11)

1. Poltavskiy pedagogicheskiy institut.
(Condensation products (Chemistry))
(Acenaphtenequinone) (Amines)

AUTHORS: Karishin, A. P., Kustol, D. M. 79-28-3-29/61

TITLE: On the Problem of the Synthesis of Naphthalimide and its Derivatives (K voprosu o sinteze naftal'imida i yego proizvodnykh)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 692-695 (USSR)

ABSTRACT: According to the authors' opinion an incorrect conception prevails in publications on the conditions of the reaction of naphthalimide and its derivatives to the corresponding imides. It was found that the anhydride of naphthalic acid and its monohalide- and mononitroderivatives can be converted to the corresponding imides by means of 15-16 % ammonia solution at 60-90°C in the course of 30 minutes, the yield being 98 %. This reaction mainly proceeds passing through the ammonium salt of the monoamide of naphthalic acid according to the mentioned scheme. This ammonium salt is formed energetically already at 50-60°C, it is easily soluble in water but is very unstable, and almost completely converts to naphthalimide (97 %). When this salt solution

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On the Problem of the Synthesis of Naphthalimide and its Derivatives 79-28 3-29/61

is acidified the monoamide of the naphthalic acid is precipitated as precipitate, which in boiling with water or in drying converts to naphthalanhydride (96 %) and to naphthalimide (4 %). The potassium salt of the monamide of naphthalic acid could be separated in free state. This proves the above mentioned opinion that in the ammonium salt solution of the monoamide of naphthalic acid the naphthalimide is formed as a side product in the reaction process. When naphthalic acid is used for the synthesis of naphthalimide its ammonium salt is formed in the reaction with aqueous ammonia, which converts to the naphthalimide only with a yield of 70 % in boiling the solution for six hours; this points to a preferred use of the anhydride and of a lower temperature. The anhydride of dihaloidnaphthalic acids convert more difficultly to the imides.
There are 11 references, 6 of which are Soviet

Card 2/3

On the Problem of the Synthesis of Naphthalimide and its Derivatives 79-28 3-29/61

ASSOCIATION: Poltavskiy gosudarstvennyy pedagogicheskiy institut (Poltava State Pedagogic Institute)

SUBMITTED: July 9, 1957

Card 3/3

5(3) SOV/79-29-6-34/72

AUTHORS: Karishin, A. P., Kustol, D. M.

TITLE: Synthesis of the 1,1'-Dinaphthyl-8,8'-dicarboxylic Acid From Naphthalimide (Sintez 1,1'-dinaftil-8,8'-dikarbonovoy kisloty iz naftalimida)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1928 - 1930 (USSR)

ABSTRACT: In industry 1,1'-dinaphthyl-8,8'-dicarboxylic acid is frequently used for the synthesis of the anthanthrone dyes. It is known from publications (Ref 1) that 1-naphthyl amine-8-sulfo acid is used as initial product for their industrial synthesis. In order to transform this acid into the 1,1'-dinaphthyl-8,8'-dicarboxylic acid a series of complicated operations has to be performed. This acid may be obtained by a much simpler method from naphthalimide which is an easily accessible product (Ref 2). The method of the conversion of naphthalimide into the lactam of the 1-amino-8-naphthoic acid (naphthostyryl) with a yield of 56.5% as well as also the conversion of the latter into 1,1'-dinaphthyl-8,8'-dicarboxylic acid (38.5% yield) are described in publications (Ref 3). The authors elaborated the methods of

Card 1/2

Synthesis of the 1,1'-Dinaphthyl-8,8'-dicarboxylic Acid From Naphthalimide SOV/79-29-6-34/72

converting naphthalimide into 1,1'-dinaphthyl-8,8'-dicarboxylic acid, viz without preceding separation of the lactam of 1-amino-8-naphthoic acid (72% yield). It was found that the lactam of the 1-amino-8-naphthoic acid may be obtained by the action of gaseous chlorine on the alkaline solution of naphthalimide at 15-17° with a yield of 86.2%. There are 4 references, 3 of which are Soviet.

ASSOCIATION: Poltavskiy gosudarstvennyy pedagogicheskiy institut (Poltava State Pedagogical Institute)

SUBMITTED: February 3, 1958

Card 2/2

5 (3)

AUTHORS: Karishin, A. P., Kustol, D. M. SOV/79-29-7-29/83

TITLE: Condensation of the Halogen Naphthalic Acid Anhydrides With Resorcin (Kondensatsiya galoidnaftalevykh angidridov s rezortsinom)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2241 - 2243 (USSR)

ABSTRACT: The halogen naphthalene fluoresceins (VIII) and (II) described in references 1 and 2 of which no melting points are given, and the bromine- and iodine derivatives of 5'-chloro- and 5'-bromonaphthalene fluoresceins, the constants of which are not given, may be obtained with optimum yields if the condensation with resorcin at 180-185° is carried out in the presence of anhydrous tin chloride within 30-40 min. Under these conditions the yield in halogen naphthalene fluoresceins is 70-74%, computed for the anhydride consumed in the reaction (35-40%). At higher temperatures up to 200-210° a higher amount of anhydrides enters the reaction. In this case, however, the yield in fluoresceins is reduced, since a large number of resins is formed. The formation of resins brings about a higher consumption of tin chloride. In the bromination and

Card 1/2

5(3)

AUTHOR: Karishin, A. P., Kustol, D. M.

SOV/79-29-8-67/81

TITLE: On Some Nitro- and Amino Derivatives of 4,5-Dichloroacenaphthene

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2745-2747 (USSR)

ABSTRACT: The nitration of 4,5-dichloroacenaphthene (I) was investigated by G. T. Morgan and H. A. Harrison (Ref 1) who synthesized dichlorodinitroacenaphthene (melting point 200°) in the course of this process. They, however, did not detect the structure of this compound; indications as to the yield are also missing. The authors found that by the nitration of 4,5-dichloroacenaphthene (I) according to the instructions given by Morgan and Harrison dichlorodinitroacenaphthene (II) with a melting point of 251 - 252° and a yield of 45 - 50% is obtained. Further experiments made it possible to increase the yield of (II) up to 72%. The produced dichlorodinitroacenaphthene (II) was consequently transformed into dichlorodiaminoacenaphthene (III), tetrachloroacenaphthene (IV), and in tetrachloronaphthalic acid (V) in that order. By the oxidation of this acid (V) only 4,6-dichlorohemimellitic acid (VI) is obtained which has already been

Card 1/2

On Some Nitro- and Amino Derivatives of 4,5-Dichloroacenaphthene

SOV/79-29-8-67/81

described in publications (Refs 2, 3) (Scheme). Thus the structure of all recently synthesized compounds was determined. Furthermore, the imide of tetrachloronaphthalic acid was obtained. There are 3 references, 1 of which is Soviet.

ASSOCIATION: Poltavskiy gosudarstvennyy pedagogicheskiy institut (Poltava State Pedagogical Institute)

SUBMITTED: July 7, 1958

Card 2/2

5(3)

AUTHORS: Karishin, A. P., Baklan, V. F.

SOV/79-29-9-52/76

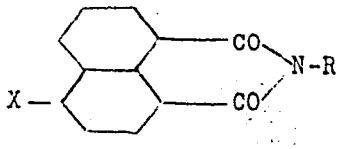
TITLE: N- Alkyl Derivatives of Naphthalimide and of Halogen Naphthalimides

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3048-3050 (USSR)

ABSTRACT: Some N-alkyl derivatives of naphthalimide are described in publications (Footnote). In order to investigate the properties of naphthalimide and its halogen derivatives they were alkylated. The alkylation was made by reacting potassium naphthalimide with the corresponding alkyl bromides in sealed ampoules at 150°. It was found that potassium naphthalimide, compared to the halogen derivatives, is more easily alkylated. Potassium naphthalimide necessary for the synthesis of the alkyl derivatives of naphthalimide was obtained in anhydrous as well as in aqueous-alkaline solution. In order to identify the preparations obtained they were alkylated and the alkyl derivatives were found to be identical. Several hitherto unknown compounds were synthesized. The N-alkyl derivatives of naphthalimide and of halogen naphthalimides are tabulated. They have the following structure:

Card 1/2

N-Alkyl Derivatives of Naphthalimide and of Halogen Naphthalimides



[R = C_2H_5, C_3H_7, C_4H_9, C_5H_{11}, C_6H_{13}; X = H,Cl,Br].
There are 1 table and 1 reference (Footnote).

ASSOCIATION: Poltavskiy gosudarstvennyy pedagogicheskiy institut (Poltava State Pedagogical Institute)

SUBMITTED: July 21, 1958

KARISHIN, A.P.; KUSTOL, D.M.

Synthesis of 4-halo derivatives of a lactam of 1-amino-8-naphthoic acid (4-halonaphthostyryles) based on acenaphthene. Zhur.ob.khim. 31 no.5:1655-1660 My '61. (MIRA 14:5)

1. Poltavskiy gosudarstvennyy pedagogicheskiy institut.
(Naphthoic acid)

KARISHIN, A.P.; KUSTOL, D.M.

Condensation of 5-fluoroacenaphthenequinone with 3-oxythionaphthene and its derivatives. Zhur.ob.khim. 32 no.10:3142-3143 O '62. (MIRA 15:11)

1. Poltavskiy gosudarstvennyy pedagogicheskiy institut.
(Naphthalenone) (Naphthenes)

KARISHIN, A. P.; KUSTOL, D. M.

Condensation of 5-iodoacenaphthenequinone with 3-hydroxy-thionaphthene and its derivatives. Zhur. ob. khim. 33 no.1: 203-204 '63. (MIRA 16:1)

1. Poltavskiy gosudarstvennyy pedagogicheskiy institut.

(Acenaphthenequinone) (Benzothiophene)

KARISHIN, A.P.

Halo derivatives of 1-amino-8-naphthoic acid lactam (naphthostyril halide). Zhur.ob.khim. 33 no.7:2250-2251 Jl '63. (MIRA 16:8)

1. Poltavskiy pedagogicheskiy institut.
(Naphthostyril)

KARISHIN, A.P.

Halo-8-nitro-1-naphthoic acids. Zhur.ob.khim. 33 no.7:2247-2250 Jl '63. (MIRA 16:8)

1. Poltavskiy pedagogicheskiy institut.
(Naphthoic acid)

KARISHIN, A.P.

Haloanthanthrones. Zhur.ob.khim. 33 no.10:3290-3292 O '63.
(MIRA 16:11)

1. Poltavskiy pedagogicheskiy institut.

KARISHIN, A.P.; KUSTOL, D.M.

Synthesis of 5-chloro-6-iodoacenaphthene and products of its oxidation. Zhur. ob. khim. 34 no. 3:924-926 Mr '64.
(MIRA 17:6)

1. Poltavskiy gosudarstvennyy pedagogicheskiy institut.

KARISHIN, A.P.; KUSTOL, D.M.

Synthesis of 5,6-diiodoacenaphthene and its oxidation products.
Zhur. ob. khim. 34 no. 3:1001-1004 Mr '64 (MIRA 17:6)

1. Poltavskiy gosudarstvennyy pedagogicheskiy institut.

KARISHIN, A.P.; KUSTOL, D.M.

Condensation of 5-chloro-6-fluoracenenaphthenequinone with 3-hydroxythionaphthene and its derivatives. Zhur. ob. khim. 34 no.9:3066-3068 S '64. (MIRA 17:11)

1. Poltavskiy pedagogicheskiy institut.

KARISHIN, A.P.; SAMUSENKO, Yu.V.

Condensation of acenaphthene quinone and its halo derivatives with pseudothiohydantoin. Zhur. org. khim. 1 no.6:1003-1004 Je '65.
(MIRA 18:7)

1. Poltavskiy gosudarstvennyy pedagogicheskiy institut.

KARTSHIN, A.P.; SOLOMAKHA, L.A.

Condensation of acenaphthenequinone and its halo derivatives with rhodanine. Zhur. org. khim. 1 no.11:2062-2065 N '65. (MIRA 18:12)

1. Poltavskiy pedagogicheskiy institut. Submitted August 4, 1964.

176T7

KARISHNEV, R.

USSR/Biology - Plant Breeding Sep/Oct 50
Wheat

"Production of a Winter Type of Wheat by the Hybridization of Spring Wheat," R. Karishnev, Kalininskaya State Sel Sta

"Agrobiologiya" No 5, pp 135-137

Reports formation of typical winter wheat by crossing 2 spring wheat varieties, Tr. sphaeto-coccum rotundatum and Novinka. Discusses characteristics of resulting wheat. One photograph.

176T7

KARISHNEV, R.V.

25809. KARISHNEV,R.V. O sposobe poseva gibridnykh semyan (pshenipy). Selektsiya i semenovodstvo, 1949, 8, S. 75

SO: Letopis' Zhurnal'nykh Statey Vol. 34, Moskva 1949

KARISHNEV, R.V.

Wheat

Complex hybrids of spring wheat. Sel. i sem. 19 No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

KARISHNEV, R.V.

Effect of organomineral mixtures on flax yields. Zemledelie 5 no.5:66-67 My '57. (MLRA 10:7)

1. Novgorodskaya gosudarstvennaya sel'skokhozyaystvennaya opytnaya stantsiya.

(Flax) (Fertilizers and manures)

KARISHNEV, R.V.

Resistance of spring wheat to excessive moisture [with summary in English] Fiziol.rast. 5 no.5:409-416 S-O '58. (MIRA 11:11)

1. Oblastnaya sel'skokhozyaystvennaya opytnaya stantsiya, Novgorod.
(Wheat)